

Exelon Nuclear Power Plant Corporate Headquarters

LEED Silver Certified

Clinton Station, RR3, Box 228
Clinton, Illinois

Client: Exelon, Inc., Clinton, IL

Architect: Architectural Expressions, LLP, Forsyth, IL

Contractor: Ringland-Johnson, Inc., Cherry Valley, IL

Range of Services

- Providing complete structural services, including all design phases of the three story building
- Designed all exterior ramps, elevated walkways and sun-screens

Project Overview

This three story corporate headquarters building is set next to the Clinton nuclear power station and eventually will connect to it via an elevated trussed walkway. The building is really two long thin rectangles in plan – one is orthogonal and the set at approximately 12 degrees from the other and separated to create a central 3 story atrium space that runs the full length of the building. This architectural feature complicated the steel structural system, which was controlled by seismic forces rather than wind. A lateral load resistance system composed of x-bracing, moment frames and knee braces combines to transfer forces between floor and roof diaphragms and eventually to the 4 foot deep mat foundation. Further complications were the tall floor to floor heights and the deep retaining wall system to accommodate a site with dramatic slopes on three sides. See *image 2*. Elevated exterior walkways were required to accommodate pedestrian traffic around the exterior of the building. The sloping roof planes were complicated due to the skewed geometry of the two rectangular building components. See *image 3*. The building was clad in pre-cast concrete panels. Overhangs were part of the architectural expression and were dealt with as cantilevers from the pre-cast in many cases. An exterior sunscreen system was added to the south elevation. See *image 1*.

This project received a **LEED SILVER** designation, and the structure contributed to the point total. Structural steel, deck, studs, reinforcement and concrete contributed to recycled content credit. Poured concrete contributed to regional material credit.



1



2



3

integrating
STRUCTURAL
design
focused on
quality